

# Claims

- [c1] 1. An imaging X-ray tube rotor assembly for an imaging tube comprising, at least partially, a magnetic non-corrosive material.
- [c2] 2. An imaging X-ray tube rotor assembly as in claim 1 comprising:  
a rotor core produced at least partially from a magnetic non-corrosive material.
- [c3] 3. An imaging X-ray tube rotor assembly as in claim 2 wherein said rotor core approximately comprises at least 12% chromium.
- [c4] 4. An imaging X-ray tube rotor assembly as in claim 2 wherein said rotor core at least partially comprises stainless steel.
- [c5] 5. An imaging X-ray tube rotor assembly as in claim 2 further comprising an oxidized exterior surface.
- [c6] 6. An imaging X-ray tube rotor assembly as in claim 2 further comprising:  
a slot integrally formed with said rotor core; and  
a bar produced at least partially from a non-magnetic

highly conductive material coupled to said slot.

- [c7] 7. An imaging X-ray tube rotor assembly as in claim 6 wherein said non-magnetic highly conductive material comprises at least one of the following: copper, aluminum, silver, nickel, cobalt, and an alloy formed of two or more of the stated materials.
- [c8] 8. An imaging X-ray tube rotor assembly as in claim 2 further comprising:
  - a plurality of slots integrally formed with said rotor core;
  - and
  - a plurality of bars produced at least partially from a non-magnetic highly conductive material and coupled to said plurality of slots.
- [c9] 9. An imaging X-ray tube rotor assembly as in claim 8 wherein said non-magnetic highly conductive material comprises at least one of the following: copper, aluminum, silver, nickel, cobalt, and an alloy formed of two or more of the stated materials.
- [c10] 10. An imaging X-ray tube rotor assembly as in claim 2 further comprising:
  - a sheet coupled to said rotor core and produced at least partially from a non-magnetic highly conductive material; and

a sleeve coupled to said sheet and produced at least partially from a non-magnetic non-corrosive material.

[c11] 11. An imaging X-ray tube rotor assembly as in claim 10 wherein an exterior oxidized surface of said sleeve is oxidized.

[c12] 12. An imaging X-ray tube rotor assembly as in claim 10 wherein an exterior oxidized surface of said sleeve is non-oxidized.

[c13] 13. An imaging X-ray tube rotor assembly as in claim 10 wherein said non-magnetic highly conductive material comprises at least one of the following: copper, aluminum, silver, nickel, cobalt, and an alloy formed of two or more of the stated materials.

[c14] 14. An imaging X-ray tube rotor assembly as in claim 10 wherein said non-magnetic non-corrosive iron based material comprises approximately at least 12% chromium.

[c15] 15. An imaging X-ray tube rotor assembly as in claim 10 wherein said non-magnetic non-corrosive iron based material comprises stainless steel.

[c16] 16. An imaging X-ray tube rotor assembly comprising: a rotor core produced at least partially from stainless

steel and comprising;  
a plurality of slots integrally formed with said rotor core;  
and  
a plurality of bars produced at least partially from a non-magnetic highly conductive material and coupled to said plurality of slots.

- [c17] 17. An imaging X-ray tube comprising an imaging tube rotor assembly having a rotor core produced at least partially from a magnetic non-corrosive material.
- [c18] 18. A method of producing an imaging X-ray tube rotor assembly comprising forming a rotor core at least partially from a magnetic non-corrosive iron based material.
- [c19] 19. A method as in claim 18 wherein forming a rotor core comprises forming said rotor core at least partially from chromium.
- [c20] 20. A method as in claim 18 further comprising forming a sheet over said rotor core and at least partially from a non-magnetic highly conductive material.
- [c21] 21. A method as in claim 20 further comprising forming a sleeve produced at least partially from a non-magnetic non-corrosive material over said sheet.
- [c22] 22. A method as in claim 21 further comprising oxidizing

an exterior surface of said sleeve.

[c23] 23.A method as in claim 18 further comprising:  
integrally forming a slot in said rotor core; and  
forming a bar within said slot and at least partially from  
a non-magnetic highly conductive material.

[c24] 24.A method as in claim 18 further comprising:  
integrally forming a plurality of slots in said rotor core;  
and  
forming bars within said plurality of slots and at least  
partially from a non-magnetic highly conductive material.

[c25] 25.A method as in claim 18 further comprising oxidizing  
an exterior surface of the imaging tube rotor assembly.